IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Before the Board of Patent Appeals and Interferences

Ex Parte:	LALLET, ARTHUR
Application Number:	10/070,202
Filing Date:	March 4, 2002
Title:	Apparatus and Method for Image Transmission
Group:	2621
Examiner:	ANAND SHASHIKANT RAO

BRIEF ON BEHALF OF APPELLANTS UNDER 37 CFR 41.37

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I. REAL PARTY IN INTEREST

The name of the real party in interest for purposes of this appeal is Motorola, Inc., a Delaware corporation.

II. RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences known to the Applicant, the Applicant's legal representative, or assignee which would directly affect or be directly affected by or having a bearing on the Board's decision in this pending appeal.

III. STATUS OF CLAIMS

Claims 1-14, 51 and 52 remain in the application. Claims 1-14, 51 and 52 are being appealed. Claims 1-14, 51 and 52 stand or fall together.

In a final Office Action dated June 2, 2006, the Examiner rejected Claims 1-14, 51 and 52 under 35 U.S.C. 103(a) as being unpatentable over Riek, et al. (USPN 5,987,179).

IV. STATUS OF AMENDMENTS

No amendments to the claims have been made subsequent to the Final Office Action mailed June 2, 2006.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Although specification citations are inserted below in accordance with 37 C.F.R. § 41.37, these reference numerals and citations are merely examples of where support may be found in the specification for the terms used in this section of the brief. There is no intention to in any way suggest that the terms of the claims are limited to the examples in the specification. Although, as demonstrated by the reference numerals and citations below, the claims are fully supported by the specification as required by law, it is improper under the law to read limitations from the specification into the claims. Pointing out specification support for the claim terminology, as is done here to comply with rule 41.37, does not in any way limit the scope of the claims to those examples from which they find support. Nor does this exercise provide a mechanism for circumventing the law precluding reading limitations into the claims from the specification. In short, the reference numerals and specification citations are not to be construed as claim limitations or in any way used to limit the scope of the claims.

The invention, as defined in independent Claim 1 and with reference to FIG. 3, is apparatus (100) for controlling the amount of data used to transmit still images during or after the transmission of a video sequence from a first to a second location, the apparatus comprising: encoding means (105) arranged for intraframe only encoding of still images for transmission and intraframe encoding part or all of selected video sequence frames; calculating means (107) for determining the data size only of intraframe encoded video sequence frames; and control means (106) for controlling intraframe only encoding of still images for transmission in dependence on the determined intraframe encoded size of a previous video sequence frame. (Specification page 9, line 30 to page 10, line 20).

The invention, as defined in independent Claim 8 and with reference to FIG. 4, is a method for controlling the amount of data used to transmit still images during or after the transmission of a video sequence from a first to a second location, the method comprising the steps of: intraframe encoding part or all of selected video sequence frames; determining the data size (1004) only of intraframe encoded video sequence frames; and when sending a still image, controlling intraframe only encoding (1006-1010) of said image in dependence on the determined intraframe encoded size of a previous video sequence frame. (Specification page 10, line 26 to page 12, line 19).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A. Whether Claims 1-14, 51 and 52 are patentable under 35 U.S.C. 103(a) over Riek, et al. (USPN 5,987,179)?

VII. ARGUMENT

A. Claims 1-14, 51 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Riek, et al. (USPN 5,987,179).

To establish a *prima facie* case of obviousness, and hence to find Claims 1-14, 51 and 52 unpatentable under 35 U.S.C. § 103(a) over Riek, et al., three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all of the claim limitations. The teaching or suggestion to make the claimed combination and the

reasonable expectation of success must both be found in the prior art, and not be based upon applicant's disclosure. MPEP at § 2142.

In the present case, all three criteria are not met because the Riek, et al. reference does not teach or suggest all of the claim limitations of independent Claims 1 and 8.

Regarding Claim 1, this claim recites the limitations of "encoding means arranged for intraframe only encoding of still images", which is not taught in Riek, et al. The Examiner concedes on page 2-3 of the Final Office Action that "Riek fails to disclose intraframe only encoding of still images". The Examiner, however, argues that "the modification of Riek to use intraframe only encoding for still images is a modification to Riek that would be readily apparent to one of ordinary skill in the art because it is merely the elimination of the use of P and B frames from the still frame encoding process and one that the courts have already established as obvious, *In re Karlson*, 136 USPQ 184 (CCPA) & *In re Wilson*, 153 USPQ 740 (CCPA 1967). Accordingly, given this established legal conclusion and Riek, it would have been obvious for one of ordinary skill in the art to eliminate P and B frames from the still frame encoding process of Riek in order to streamline the still frame encoding function by eliminating the need for motion picture compensation for still frame encoding . . . The Riek apparatus, as modified to implement only I frame still frame encoding, has all of the features of claim 1".

Applicants disagree with the Examiners conclusions for the following reasons. First, Applicants fail to understand how the Examiner concluded that the courts in the two above-referenced cases *In re Karlson* and *In re Wilson* established that elimination of the use of P and B frames from the still frame encoding process is obvious when neither of these cases have anything at all to do with image processing let alone a still frame encoding process. The claims discussed in the *In re Karlson* case relate to a by-pass type of feeder designed to add small

amounts of chemical to a water system, the object being to improve the properties of the water by feeding into the system a water solution of the chemical in quantity proportioned to the flow of water therethrough. Page 1, col. 2. The invention described in the *In re Wilson* case relates to a method of making an elastomeric resinous material by condensing a polycarbonate, obtained from the reaction of a glycol and phosgene or glycol and a dialkyl carbonate, with an organic diisocyanate. Page 1, col. 2. Being that neither of these cases present facts at all similar to those in the present application, this legal precedent cannot provide the rationale supporting obviousness rejections of Claims 1-14, 51 and 52, *see* MPEP § 2144.

Second the examiner has failed to establish a *prima facie* case of obviousness because there is no suggestion in the Riek, et al. reference to modify this reference to use intraframe only encoding of still images. This reference instead teaches that "any type of picture (I, B, or P) may be used" for still frame encoding, col. 4, lines 52-62, and gives examples wherein all three picture types are used, *see, e.g.,* col. 6, lines 26-41 and col. 7, line 38 to col. 8, line 17.

Moreover, there are additional limitations recited in Claim 1 that are not taught in Riek, et al. Riek, et al. also fails to teach the limitations of encoding the still images "for transmission". The Examiner cites col. 4, lines 15-25 and col. 11, lines 5-10 and 45-50 for these limitations, but Applicants disagree that the cited text teaches encoding still images for transmission. Col. 4, lines 15-25 discusses a motion/still camera using the Riek invention. There is no means included in the camera (thus illustrated) for transmitting encoded still images. The camera only has a display for displaying still images and a storage device for storing the encoded still images. Col. 11, lines 5-10 and 45-50 mention an MPEG decoder but, likewise, fails to teach encoding the still images for transmission.

Riek, et al. further fails to teach the limitations recited in Claim 1 of "calculating means for determining the data size only of intraframe encoded video sequence frames". The Examiner cites col. 8, line 6 and lines 55-67 for teaching these limitations, but this language says nothing about determining the data size only of intraframe encoded video sequence frames. In fact, other language in Riek teaches away from these limitations by teaching the use of all of the frames in the encoding process based not on a calculated size but on a "*rule of thumb . . . 6:2:1* ratio for the number of bits used to encode each of" the I, P and B pictures. Col. 7, lines 57-61. This teaching away of limitations recited in Claim 1 further supports a conclusion that the Examiner failed to establish a *prima facie* case of obviousness. *See* MPEP § 2141.02.

Riek, et al. yet further fails to teach the limitations recited in Claim 1 of "control means for controlling intraframe only encoding of still images for transmission in dependence on the determined intraframe encoded size of a previous video sequence frame". The Examiner cites col. 7, lines 40-50 as teaching these limitations. However, this language from Riek, et al. discusses using a "rate control scheme . . . to determine approximately how many bits to spend on each picture". The example given is where you have a *video* sequence of I, P and B pictures to encode at a given rate and resolution of 30 frames per second at CCIR601 resolution, encoding the *video* at 3.5 Mb/s means that there is 1.75 Mb to spend on each group of pictures, which includes one I picture, four P pictures and 10 B pictures. Thus, this language does not discuss: intraframe only encoding (because all three picture types are encoded); encoding of still images (because video images are encoded in this passage); encoding still images for transmission (talks only about encoding and not transmission); or encoding depending on determined intraframe encoded size of previous video (encoding instead depends on encoding rate and resolution of the images in the current video sequence).

Therefore since limitations recited in Claim 1 and included by dependency in Claim 2-7, 51 and 52 are missing from the Riek, et al. reference, a rejections of these claims under 35 U.S.C. § 103(a) is improper and should be withdrawn.

Regarding Claim 8, for the same reasons above as discussed with respect to Claim 1, Riek, et al. fails to teach the limitations recited in Claim 1 of "determining the data size only of intraframe encoded video sequence frames; and when sending a still image, controlling intraframe only encoding of said image in dependence on the determined intraframe encoded size of a previous video sequence frame". Therefore since limitations recited in Claim 8 and included by dependency in Claims 9-14 are missing from the Riek, et al. reference, a rejection of these claims under 35 U.S.C. § 103(a) is improper and should be withdrawn.

For the reason set forth above, Applicants submit that the Examiner has incorrectly rejected Claims 1-14, 51 and 52 under 35 U.S.C. § 103(a) and request that the Board withdraw the rejections.

Respectfully submitted,

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VIII. CLAIMS APPENDIX

1. (previously presented) Apparatus for controlling the amount of data used to transmit still images during or after the transmission of a video sequence from a first to a second location, the apparatus comprising:

encoding means arranged for intraframe only encoding of still images for transmission and intraframe encoding part or all of selected video sequence frames;

calculating means for determining the data size only of intraframe encoded video sequence frames; and

control means for controlling intraframe only encoding of still images for transmission in dependence on the determined intraframe encoded size of a previous video sequence frame.

2. (previously presented) Apparatus according to claim 1, in which the encoding means is arranged to intraframe encode part or all of each video sequence frame and the control means is arranged to control intraframe only encoding of a still image in dependence on the determined size of the most recently intraframe encoded video sequence frame.

3. (previously presented) Apparatus according to claim 1 in which the control means is arranged to select a quantization factor for use in encoding of a still image in dependence on the determined intraframe encoded size of a previous video sequence frame.

4. (previously presented) Apparatus according to claim 1 in which the control means is arranged to select, in dependence on the determined intraframe encoded size of a previous video sequence frame, a first quantization factor for use in encoding a first part of a still image and a second quantization factor for use in encoding a second part of a still image.

5. (previously presented) Apparatus according to claim 1 in which the encoding means is arranged to carry out an encoding process in which an image is considered to comprise a plurality of blocks, each of which is intraframe only encoded.

6. (previously presented) Apparatus according to claim 1 in which the control means is arranged to control intraframe only encoding of still images with the aim of keeping the data size of the encoded image within predetermined limits.

7. (previously presented) Apparatus according to claim 1 in which the encoding and transmission of the still images is compatible with the scheme used for encoding and transmitting of the video sequence.

8. (previously presented) A method for controlling the amount of data used to transmit still images during or after the transmission of a video sequence from a first to a second location, the method comprising the steps of:

intraframe encoding part or all of selected video sequence frames;

determining the data size only of intraframe encoded video sequence frames; and

when sending a still image, controlling intraframe only encoding of said image in dependence on the determined intraframe encoded size of a previous video sequence frame.

9. (previously presented) A method according to claim 8, comprising the steps of intraframe encoding part or all of each video sequence frame and controlling intraframe only encoding of a still image in dependence on the determined size of the most recently intraframe encoded video sequence frame.

10. (previously presented) A method according to claim 8, comprising the step of selecting a quantization factor for use in encoding a still image in dependence on the determined intraframe encoded size of a previous video sequence frame.

11. (previously presented) A method according to claim 8 comprising the step of selecting, in dependence on the determined intraframe encoded size of a previous video sequence frame, a first quantization factor for use in encoding a first part of a still image and a second quantization factor for use in encoding a second part of a still image.

12. (previously presented) A method according to claim 8 in which the encoding process is one in which an image is considered to comprise a plurality of blocks each of which is intraframe only encoded.

13. (previously presented) A method according to claim 8 in which the intraframe only encoding of still images is conducted with the aim of keeping the data size of the encoded image within predetermined limits.

14. (previously presented) A method according to claim 8 in which the encoding and transmission of the still images is compatible with the scheme used for encoding and transmitting of the video sequence.

15-50 (withdrawn)

51. (previously presented) Apparatus according to claim 1 further comprising:
encoding means arranged for intraframe only encoding still images for transmission, the encoding process being one in which a still image is considered to comprise a plurality of blocks each of which is intraframe only encoded;

calculating means for determining the data size of intraframe only encoded blocks; and

control means for controlling encoding of selected blocks in dependence on the determined data size of one or more previously encoded block.

52. (previously presented) Apparatus according to claim 1 further comprising:

encoding means arranged for intraframe only encoding still images for transmission, the encoding process being one in which a still image is considered to comprise a plurality of blocks each of which is intraframe only encoded;

calculating means for determining the data size of part of an intraframe only encoded image comprising at least one intraframe encoded block;

judging means for determining whether the determined data size of said part of an intraframe only encoded image falls within a preselected range; and

control means for causing re-encoding of said part of an intraframe only coded frame, prior to transmission, in such a way as to change the data size of said part of an intraframe only coded image when the determined data size falls outside the preselected range.

IX. EVIDENCE APPENDIX

No evidence has been submitted pursuant to 37 C.F.R. §§ 1.130, 1.131, or 1.132, entered by the examiner and relied upon by the appellant in the appeal, or relied upon by the examiner as to grounds of rejection to be reviewed on appeal.

X. RELATED PROCEEDINGS APPENDIX

No decisions have been rendered by a court of the Board in any proceeding identified pursuant to paragraph (c)(1)(ii) of 37 C.F.R. § 41.37.